IN THE SPECIFICATION

Please replace the paragraph on page 1 at lines 2–5 of the specification with the following:

This application is ~~based on~~ a divisional of prior United States Patent Application Serial No. 09/935,935 filed August 23, 2001, now United States Patent No. 6,732,014, and claims priority United States Provisional Patent Application No. 60/271,998, filed February 27, 2001, which is hereby incorporated by reference. This application includes subject matter protected by copyright.

Please replace the paragraph on page 3 at lines 2–12 of the specification with the following:

A vending system that verifies the delivery of a ordered product using a product delivery system that sends a product from a first, storage position through a delivery path to a second, receiving position, a sensing system located along the delivery path that senses when the product passes a sensor during the product transition through the delivery path from the first position to the second position, and a reporting circuitry electronically coupled to the sensing circuitry wherein the reporting circuitry reports to the product delivery system when the product has passed through the sensing system.

Please replace the paragraph on page 8 at lines 15–18 of the specification with the following:

If the customer chooses a refund, then the present invention delivers a signal to make a refund, in step 160, whereupon a signal is sent to the monitoring system that the order is complete in step 135 and to the monitoring system to ~~enters~~ enter into steady state calibration mode in step 140. If the customer chooses a second, different product, then the present invention returns to 120 and the process proceeds as described above, until the operation is complete.

Please replace the paragraph bridging page 9, line 19 through page 10, line 4 of the specification with the following:

The monitoring system is comprised of an emitter arm 240 upon which are located a set number of one or more emitters 242, and a detector arm 250 comprising of one or more detectors 252 and located directly across delivery path 225 from the emitter arm 240. Emitter signals, the total of which comprise light plane 234, are sent from the emitters 242 to the detectors 252 across the delivery path 225, during both monitoring mode and calibration mode. The emitter arms and detector arms are described in more detail in FIGS. 3A[[,]] and 3B.

Please replace the paragraph on page 10 at lines 14–24 of the specification with the following:

The emitters may comprise of an optical monitoring device. The spacing of optical emitters is determined by five factors: emitter size, optical diffusion, ambient light, product size and the reflected light. Emitter size and optical diffusion ~~is~~ are fixed at the time of construction[[,]]; however, ambient and reflective light may vary over the course of use of the emitter. Infrared light may be used to help to reduce these effects[[,]]; however, it is clearly understood and contemplated by the present invention that other types of light sources can be used, including various lasers or white light sources.

Please replace the paragraph on page 11 at lines 8–21 of the specification with the following:

Figure 3B shows the detector arm portion of the monitoring system. The shape and construction of the detecting arm 350B is related to the shape and construction of the emitting arm 310A. The detecting arm 350B is placed on the same plane, parallel to and across the delivery path from arm 310A (see **Figure 2** for more details). The detectors 355B are arranged so that their vertical spacing and horizontal arrangement mirror the ~~emitter's~~ emitter arrangement on arm 310A.

Likewise, the body 360B of 350B is constructed of material suitable to contain detection and logic circuitry 365B, attachment holes 370B, and a power source 375B. The choice of the type of detector is directly related to the type of emitter being utilized in the present invention.

Please replace the paragraph bridging page 13, line 21 through page 15, line 10 of the specification with the following:

The calibration mode adjusts the light intensity from each emitter as necessary so that each set of three detectors serviced by that emitter receives only enough intensity, plus a small safety margin, to be active in the unblocked condition. This minimizes the adverse ~~affects~~ effects of reflected light from the emitters and allows for a wider detector aperture (which makes system alignment easier) and reduces the overall power requirements of the system. In step 505, the logic circuit in the monitoring system determines whether an order has been placed. If an order has not been placed, then the monitoring system proceeds to send a series of pulses to the first of the one or more emitters in step 510. Upon sending a pulse, the monitoring system queries the emitter's corresponding detector and each detector on either side of the corresponding detector to determine if those detectors detected the pulsed signal in step 515. If a signal was detected in each of the three detectors then

the monitoring circuitry sequences to the next emitter in step 520. The ~~emitter's~~ emitters typically have adjustable signal power levels associated with the type of emitter used. The calibration mode will attempt to maintain the power level at the level needed to provide just enough signal, plus a safety margin, such that the corresponding detectors detect the signal. If any one of the three detectors does not detect the pulsed signal from the emitter, then in step 530, the monitoring circuitry determines whether the emitter is operating at its maximum power intensity. If the emitter is not, then the emitter will step increase the signal power level in step 560 and re-send a pulsed signal to the detectors again in step 510. If the power intensity for that emitter is at its maximum intensity, then the detector will send an error message to the monitoring system in step 540. The monitoring system will then follow a precoded routine to shut down the entire vending operation, shut down the monitoring system or rely on prior art ordering systems (the home switch method) in step 550.

Please replace the paragraphs bridging page 15, line 21 through page 17, line 16 of the specification with the following:

Apertures 620 keep the majority of the unwanted light from reaching the detection side of the monitoring system. In addition, the detectors ~~630~~ 625 have a

usable 60 degree horizontal/30 degree vertical reception angle. Light arriving at the detector at angles greater than these is rejected. Additionally, infrared optical detectors contain optical frequency filters, which reject visible light frequencies, but pass the infrared frequencies of interest. Modulation techniques, whereby the detector only responds to certain signal frequencies from the infrared emitters, may also be used to allow the detectors to distinguish between the ambient light and the desired point source light frequency from the emitter.

As mentioned above, product detection may be accomplished by utilizing infrared emitter/detector pairs that can monitor and detect when a signal path is broken. In a typical [[a]] vending machine's delivery paths, a set of ten infrared emitter/detector pairs are used to cover the delivery path much like a light curtain.

Figure 7 shows a representative example of a light curtain 730 that may be utilized in the present invention. Typically, nine sets of emitters/detectors are used to cover the main delivery path, while the tenth set is used to cover a gum/mint area. The nine sets that cover the main delivery path implement a technique, which, other than for the first and last emitter, requires that[[,]] a minimum of three detectors ~~are~~ be active for each individual emitter monitor cycle. For those vending machines without a gum or mint section, the tenth emitter may be used for the main delivery area, provided that proper alignment of the ten sets is taken into consideration.

This arrangement is illustrated in **Figure 7**, which shows the light beams 710 of interest for each emitter 720 and detector 725. The spacing of the emitter/detector sets are chosen to assure that the smallest size traditional product breaks the path of at least one beam when it crosses the light curtain during delivery. The technique of servicing three detectors for each emitter[[,]] allows the monitor to read multiple light beams, which further reduces this spacing in the majority of the delivery area. A logic circuit determines whether a light beam has been broken.

Please replace the paragraph bridging page 18, line 19 through page 19, line 9 of the specification with the following:

The vending system has several operating options. These may be viewed and programmed by pressing the PRODUCT CONFIG service key on the keypad located on the inside of the vending machine and pressing the down arrow until the appropriate option is reached. The keypad has an associated display device, such as an ~~led~~ LED screen or such other typical devices that allow the operator to view the code and results stored within the system.

By depressing the EDIT key, the vendor can choose between "SURE.V ON" or "SURE.V OFF". "SURE.V OFF" is chosen by the operator only if the monitoring system is not installed or if the operator does not wish [[it]] to use it at the present

time. The remaining options for the PRODUCT CONFIG mode are only visible if "SURE.V ON" is selected and the monitoring system is available.